Index to Volume 84 (January–June 1957)

[Note: In all divisions of this index, the letter (L) following a title indicates a letter to the editors.]

Title Index of Articles and Letters

AAAS affairs: AAAS council meeting, 1956, D. Wolfle, 151; AAAS membership, 204; AAAS officers, committees, and representatives for 1957, 201; AAAS Pacific division meets, R. C. Miller, 53; AAAS socio-psychological prize, 264; Applications solicited for traveling library program, 212; Dedication of the new AAAS headquarters building, P. B. Sears, 24; New York meeting in retrospect, R. L. Taylor, 204; Preliminary report of AAAS Interim Committee on the Social Aspects of Science, W. Pigman, B. Commoner, G. Lasker, C. D. Leake, B. H. Williams, 146; Regional consultants on science and mathematics teaching, J. R. Mayor, 154; Tatum named to editorial board, G. DuShane, 264

Canalization of the Moselle, W. E. McIntyre, 255
Changing energy scene, C. A. Scarlott, 221
Colorado dam controversy (L), P. H. Shepard, Jr.; A. M. Woodbury, 199

Dedication of the new AAAS headquarters building, P. B. Sears, 24

Ecology and overpopulation, L. R. Dice, 165

Formation of the elements, W. A. Fowler, 84; erratum, 200

Genetics in animal breeding, I. M. Lerner, 183
Genetics counselors (L), A. Scheinfeld, 199
Global distribution of strontium-90 from nuclear detonations, M. Eisenbud, 237

International observatory, An, J. B. Irwin, 111

Jungle brimstone, W. Haynes, 128

Livestock parasites and grass, B. Schwartz and H. H. Vegors, 229

Man's place in living nature, H. J. Muller, 245
Meteorology in the International Geophysical Year, H. Wexler, 141

Nature of genius, E. Jones, 75
Nautical charting, A. L. Shalowitz, 290

Oil shale and bituminous sand, F. L. Hartley and C. S. Brinegar, 275

Political science of science, H. D. Lasswell, 34
Present crisis in science education (L), W. P. Betham, Jr., 197

Radiation and genetics, L. C. Dunn, 6
Radiation and the human body, S. Warren, 3
Rice culture in Spain, R. E. Crist, 66
Role of statistics in scientific research, J. W. Mayne, 26

Scientists through adolescent eyes: what we need to know, why we need to know it, D. N. Michael, 135
Silverfish, a paper-eating insect, R. Lasker, 123
Sinkholes, bottomless lakes, and the Pecos River, E. R. Harrington, 302
Solar energy on clear and cloudy days, S. Fritz, 55
Some implications of the study of animal behavior, W. H. Thorpe, 309
Studies on deep mass culture of algae in Israel, A. M. Mayer, A. Eisenberg, M. Evenari, erratum, 200

Thomas Henry Huxley, C. S. Blinderman, 171

Uses of atomic radiation and energy, L. R. Hafstad, 11

What we most need to know, L. H. Snyder, 17
What's wrong with phonics (L), N. N. Neal, 198
When is human behavior predetermined? E. G. Boring, 189

Author Index

Anderson, J. E., Book review, 323

Bardach, J. E., Book review, 322
Bates, G. E., Book review, 104
Beetham, W. P., Jr., Present crisis in science education (L), 197
Berry, E. W., Book review, 45, 106
Blinderman, C. S., Thomas Henry Huxley, 171
Boring, E. G., When is human behavior predetermined? 189
Boyd, W. C., Book review, 213
Brinegar, C. S. *See* Hartley, F. L., 275
Brownlee, K. A., Book review, 48
Burns, A. E., Book review, 216
Burr, H. S., Book review, 156
Byerly, T. C., Book review, 105

Carlander, K. D., Book review, 266
Commoner, B., Preliminary report of AAAS Interim Committee on the Social Aspects of Science, 146
Corson, S. A., Book review, 47
Crist, R. E., Rice culture in Spain, 66

Daggs, R. G., Book review, 324
DallaValle, J. M., Book review, 270
Deason, H. J., Book review, 321
Dice, L. R., Ecology and overpopulation, 165
Dukes, W. F., Book review, 49
Dunn, L. C., Radiation and genetics, 6
DuShane, G., Tatum named to editorial board, 264

Edmondson, F. K., Book review, 50
Eisenberg, A. *See* Mayer, A. M., 200
Eisenbud, M., Global distribution of strontium-90 from nuclear detonations, 237
Ewan, J., Book review, 161

Fleischer, R., Book review, 103, 214
Fowler, W. A., Formation of the elements, 84; erratum, 200
Fritz, S., Solar energy on clear and cloudy days, 55

Gardner, P. V., Book review, 267
Gardner, T. S., Book review, 44

Haar, D. ter, Book review, 323
Hafstad, L. R., Uses of atomic radiation and energy, 11
Hancock, J., Book review, 103, 160

Index to Volume 84 (January–June 1957)

[Note: In all divisions of this index, the letter (L) following a title indicates a letter to the editors.]

Title Index of Articles and Letters

AAAS affairs: AAAS council meeting, 1956, D. Wolfle, 151; AAAS membership, 204; AAAS officers, committees, and representatives for 1957, 201; AAAS Pacific division meets, R. C. Miller, 53; AAAS socio-psychological prize, 264; Applications solicited for traveling library program, 212; Dedication of the new AAAS headquarters building, P. B. Sears, 24; New York meeting in retrospect, R. L. Taylor, 204; Preliminary report of AAAS Interim Committee on the Social Aspects of Science, W. Pigman, B. Commoner, G. Lasker, C. D. Leake, B. H. Williams, 146; Regional consultants on science and mathematics teaching, J. R. Mayor, 154; Tatum named to editorial board, G. DuShane, 264

Canalization of the Moselle, W. E. McIntyre, 255
Changing energy scene, C. A. Scarlott, 221
Colorado dam controversy (L), P. H. Shepard, Jr.; A. M. Woodbury, 199

Dedication of the new AAAS headquarters building, P. B. Sears, 24

Ecology and overpopulation, L. R. Dice, 165

Formation of the elements, W. A. Fowler, 84; erratum, 200

Genetics in animal breeding, I. M. Lerner, 183
Genetics counselors (L), A. Scheinfeld, 199
Global distribution of strontium-90 from nuclear detonations, M. Eisenbud, 237

International observatory, An, J. B. Irwin, 111

Jungle brimstone, W. Haynes, 128

Livestock parasites and grass, B. Schwartz and H. H. Vegors, 229

Man's place in living nature, H. J. Muller, 245
Meteorology in the International Geophysical Year, H. Wexler, 141

Nature of genius, E. Jones, 75
Nautical charting, A. L. Shalowitz, 290

Oil shale and bituminous sand, F. L. Hartley and C. S. Brinegar, 275

Political science of science, H. D. Lasswell, 34
Present crisis in science education (L), W. P. Betham, Jr., 197

Radiation and genetics, L. C. Dunn, 6
Radiation and the human body, S. Warren, 3
Rice culture in Spain, R. E. Crist, 66
Role of statistics in scientific research, J. W. Mayne, 26

Scientists through adolescent eyes: what we need to know, why we need to know it, D. N. Michael, 135
Silverfish, a paper-eating insect, R. Lasker, 123
Sinkholes, bottomless lakes, and the Pecos River, E. R. Harrington, 302
Solar energy on clear and cloudy days, S. Fritz, 55
Some implications of the study of animal behavior, W. H. Thorpe, 309
Studies on deep mass culture of algae in Israel, A. M. Mayer, A. Eisenberg, M. Evenari, erratum, 200

Thomas Henry Huxley, C. S. Blinderman, 171

Uses of atomic radiation and energy, L. R. Hafstad, 11

What we most need to know, L. H. Snyder, 17
What's wrong with phonics (L), N. N. Neal, 198
When is human behavior predetermined? E. G. Boring, 189

Author Index

Anderson, J. E., Book review, 323

Bardach, J. E., Book review, 322
Bates, G. E., Book review, 104
Beetham, W. P., Jr., Present crisis in science education (L), 197
Berry, E. W., Book review, 45, 106
Blinderman, C. S., Thomas Henry Huxley, 171
Boring, E. G., When is human behavior predetermined? 189
Boyd, W. C., Book review, 213
Brinegar, C. S. *See* Hartley, F. L., 275
Brownlee, K. A., Book review, 48
Burns, A. E., Book review, 216
Burr, H. S., Book review, 156
Byerly, T. C., Book review, 105

Carlander, K. D., Book review, 266
Commoner, B., Preliminary report of AAAS Interim Committee on the Social Aspects of Science, 146
Corson, S. A., Book review, 47
Crist, R. E., Rice culture in Spain, 66

Daggs, R. G., Book review, 324
DallaValle, J. M., Book review, 270
Deason, H. J., Book review, 321
Dice, L. R., Ecology and overpopulation, 165
Dukes, W. F., Book review, 49
Dunn, L. C., Radiation and genetics, 6
DuShane, G., Tatum named to editorial board, 264

Edmondson, F. K., Book review, 50
Eisenberg, A. *See* Mayer, A. M., 200
Eisenbud, M., Global distribution of strontium-90 from nuclear detonations, 237
Ewan, J., Book review, 161

Fleischer, R., Book review, 103, 214
Fowler, W. A., Formation of the elements, 84; erratum, 200
Fritz, S., Solar energy on clear and cloudy days, 55

Gardner, P. V., Book review, 267
Gardner, T. S., Book review, 44

Haar, D. ter, Book review, 323
Hafstad, L. R., Uses of atomic radiation and energy, 11
Hancock, J., Book review, 103, 160

Harrington, E. R., Sinkholes, bottomless lakes, and the Pecos River, 302
Hartley, E. L., Book review, 271
Hartley, F. L., and C. S. Brinegar, Oil shale and bituminous sand, 275
Haynes, W., Jungle brimstone, 128
Herzfeld, R. F., Book review, 216

Iltis, H. H., Book review, 266
Irwin, J. B., An international observatory, 111

Jones, E., Nature of genius, 75

Kaikow, J., Book review, 215
Knapp, R. H., Book review, 104

Lasker, G., Preliminary report of AAAS Interim Committee on the Social Aspects of Science, 146
Lasker, R., Silverfish, a paper-eating insect, 123
Lasswell, H. D., Political science of science, 34
Leake, C. D., Preliminary report of AAAS Interim Committee on the Social Aspects of Science, 146
Lerner, I. M., Genetics in animal breeding, 183

Mayer, A. M., A. Eisenberg, M. Evenari, Studies on deep mass culture of algae in Israel, erratum, 200
Mayne, J. W., Role of statistics in scientific research, 26
Mayor, J. R., Regional consultants on science and mathematics teaching, 154
McIntyre, W. E., Canalization of the Moselle, 255
Michael, D. N., Scientists through adolescent eyes: what we need to know, why we need to know it, 135
Miller, R. C., Pacific division meets, 53
Milne, L. J., Book review, 108
Milne, M. *See* L. J. Milne, 108
Muller, H. J., Man's place in living nature, 245
Multhauf, R. P., Book review, 102, 213, 269

Neal, N. N., What's wrong with phonics? (L), 198
Newell, H. E., Jr., Book review, 158

Pigman, W., Preliminiary report of AAAS Interim Committee on the Social Aspects of Science, 146

Richards, H. G., Book review, 161
Ristow, W. W., Book review, 159
Roberts, F. H. H., Jr., Book review, 321
Romer, A. S., Book review, 101
Rosenberg, M. J., Book review, 102

Scarlott, C. A., Changing energy scene, 221
Scheinfeld, A., Genetics counselors (L), 199
Schoggen, P. H., Book review, 269
Schwartz, B., and H. H. Vegors, Livestock parasites and grass, 229
Sears, P. B., Dedication of the new AAAS headquarters building, 24
Shalowitz, A. L., Nautical charting, 290
Shepard, P. H., Jr.; A. M. Woodbury, Colorado dam controversy (L), 199
Siegfried, R., Book review, 157
Singleton, W. R., Book review, 107
Smith, H. H., Book review, 46
Snyder, L. H., What we most need to know, 17
Staebler, U. M., Book review, 160
Syer, H. W., Book review, 217

Taylor, R. L., New York meeting in retrospect, 204
Telkes, M., Book review, 320
Thorpe, W. H., Some implications of the study of animal behavior, 309
Tyler, L. E., Book review, 48

Vegors, H. H. *See* Schwartz, B., 229
Velardo, J. T., Book review, 45
Visher, S. S., Book review, 324

Wallen, I. E., Book review, 44, 214, 270
Warren, S., Radiation and the human body, 3
Wexler, H., Meteorology in the International Geophysical Year, 141
Williams, B. H., Preliminary report of AAAS Interim Committee on the Social Aspects of Science, 146
Wolfle, D., AAAS council meeting, 1956, 151
Woodbury, A. M. *See* Shepard, P. H., Jr., 199

Young, J. H., Book review, 108

Zingg, A. W., Book review, 267

Books Reviewed

Advances in Electronics and Electron Physics, vol. VIII, L. Manton, Ed., 323
Ansbacher, H. L., and R. R. Ansbacher, Eds., *Individual Psychology of Alfred Adler*, 271
Ansbacher, R. R. *See* Ansbacher, H. L., 271
Aquatic Insects of California, with Keys to North American Genera and California Species, R. L. Usinger, Ed., 108
Aspects of Culture, H. L. Shapiro, 321

Between the Planets, F. G. Watson, 103
Biological Treatment of Sewage and Industrial Wastes, vol. 1, *Aerobic Oxidation*, J. McCabe and W. W. Eckenfelder, Jr., Eds., 214
Bolton, J., *The Wind and the Weather*, 324
Botanical Exploration of the Trans-Mississippi West, 1790–1850, S. D. McKelvey, 161
Braun, W. von. *See* Ley, W., 44
Brown, W. L. *See* Wallace, H. A., 107
Bruun, A. F., S. Greve, H. Mielche, R. Sparck, *The Galathea Deep Sea Expedition*, 322
Burkitt, M. C., *The Old Stone Age*, 216

Calder Hall, K. Jay, 160
Callaghan, A. R., and A. J. Millington, *The Wheat Industry in Australia*, 103.
Ceramics for the Archaeologist, A. O. Shepard, 268
Chevalley, I. C., *Theory of Lie Groups*, 324
Child Development, E. B. Hurlock, 269
Clagett, M., *Greek Sciences in Antiquity*, 101
Corn and Its Early Fathers, H. A. Wallace and W. L. Brown, 107

Die Flechtbinse (Scirpus lacustris L.), vol. XXI of *Die Binnengewässer*, K. Seidel, 266
Discovery of the Elements, M. E. Weeks, 325
Discussions on Child Development, Proceedings of the World Health Organization Study Group on the Psychological Development of the Child, vols. I and II, J. M. Tanner and B. Inhelder, Eds., 323
Diseases of the Endocrine Glands, L. J. Soffer, 45
Disposal of Sewage and Other Water-Borne Wastes, K. Imhoff, W. J. Müller, D. K. B. Thistlethwaite, 270

Earth beneath Us, The, H. H. Swinnerton, 161
Earth Satellites, P. Moore, 158

Earth, Sky and Sea, A. Piccard, 44
Earth We Live On, The, R. Moore, 215
Eckenfelder, W. W., Jr. *See* McCabe, Brother J., 214
Encyclopaedia of the Iron and Steel Industry, An, A. K. Osborne, compiler, 322
Evolution of Human Nature, The, C. J. Herrick, 156
Exploration of Mars, The, W. Ley and W. von Braun, 44

Fighting Cheyennes, The, G. B. Grinnell, 270
Flora, S. D., *Hailstorms of the United States*, 158
Freshwater Fishery Biology, K. F. Lagler, 265
Fun with Figures, J. A. H. Hunter, 106
Future of Arid Lands, The, G. F. White, Ed., 267

Galathea Deep Sea Expedition 1950–1952, The, A. F. Bruun, S. Greve, H. Mielche, R. Sparck, 322
Gartmann, H., *Man Unlimited*, 324
Great Chain of Life, The, J. W. Krutch, 321
Greek Science in Antiquity, M. Clagett, 101
Grigor'ev, N. I., *Surgical Treatment of Penetrating Wounds of the Heart, Pericardium and Mediastinum*, 47
Grinker, R. R., and H. MacG. Hughes, Eds., *Toward a Unified Theory of Human Behavior*, 104
Grinnell, G. B., *The Fighting Cheyennes*, 270

Hailstorms of the United States, S. D. Flora, 158
Hamacher, H. F. *See* Stevens, R., 48
Handbook of Biological Data, W. S. Spector, Ed., 105
Harlan, J. R., *Theory and Dynamics of Grassland Agriculture*, 160
Herrick, C. J., *The Evolution of Human Nature*, 156
Historical Background of Chemistry, The, H. M. Leicester, 157
How to Make and Use a Telescope, H. P. Wilkins and P. Moore, 50
Hughes, H. MacG. *See* Grinker, R. R., 104
Human Heredity Handbook, The, A. Scheinfeld, 46
Hunter, J. A. H., *Fun with Figures*, 106

Imhoff, K., W. J. Müller, D. K. B. Thistlethwaite, *Disposal of Sewage and Other Water-Borne Wastes*, 270
In Search of Adam, H. Wendt, 108
Individual Psychology of Alfred Adler, The, H. L. Ansbacher and R. R. Ansbacher, Eds., 271
Inhelder, B. *See* Tanner, J. M., 323
Integration, E. J. McShane, 324
Introduction to Microfossils, D. J. Jones, 106

Jay, K., *Calder Hall*, 160

Krutch, J. W., *The Great Chain of Life*, 321

Lagler, K. F., *Freshwater Fishery Biology*, 265
Leicester, H. M., *The Historical Background of Chemistry*, 157
Levitt, I. M., *A Space Traveler's Guide to Mars*, 214
Ley, W., and W. von Braun, *The Exploration of Mars*, 44
Life of Sir William Ramsay, A, M. W. Travers, 213
Lobeck, A. K., *Things Maps Don't Tell Us*, 159

Man Unlimited, H. Gartmann, 324
Manton, L., Ed., *Advances in Electronics and Electron Physics*, vol. VIII, 323
McCabe, Brother J., and W. W. Eckenfelder, Jr., Eds., *Biological Treatment of Sewage and Industrial Wastes*, vol. 1, *Aerobic Oxidation*, 214
McKelvey, S. D., *Botanical Exploration of the Trans-Mississippi West, 1790–1850*, 161
McShane, E. J., *Integration*, 324
Microscopium, M. Rooseboom, 269
Millington, A. J. *See* Callaghan, A. R., 103
Moore, P., *Earth Satellites*, 158; *See* also Wilkins, H. P., 50
Moore, R., *The Earth We Live On*, 215
Morris, C., *Varieties of Human Value*, 49
Müller, W. J. *See* Imhoff, K., 270

Neaverson, E., *Stratigraphical Palaeontology*, 45

Needham, J., *Science and Civilisation in China*, vol. 2, *History of Scientific Thought*, 213
Newman, J. R., *The World of Mathematics*, 217
Neyman, J., Ed., *Proceedings of the Third Berkeley Symposium on Mathematical Statistics and Probability*, vol. IV, *Contributions to Biology and Problems of Health*, 104; vol. V, *Contributions to Econometrics, Industrial Research and Psychometry*, 48

Old Stone Age, The, M. C. Burkitt, 216
On Freedom and Free Enterprise, M. Sennholz, Ed., 216
Opinions and Personality, M. B. Smith, 102
Osborne, A. K., compiler, *An Encyclopaedia of the Iron and Steel Industry*, 322

Piccard, A., *Earth, Sky and Sea*, 44
Proceedings of the Third Berkeley Symposium on Mathematical Statistics and Probability, vol. IV, *Contributions to Biology and Problems of Health*, J. Neyman, Ed., 104; vol. V, *Contributions to Econometrics, Industrial Research and Psychometry*, J. Neyman, Ed., 48
Psychology of Occupations, The, A. Roe, 47

Roe, A., *The Psychology of Occupations*, 47
Rooseboom, M., *Microscopium*, 269

Scheinfeld, A., *The Human Heredity Handbook*, 46
Science and Civilisation in China, vol. 2, *History of Scientific Thought*, J. Needham, 213
Scientific Sampler, A, R. Stevens, H. F. Hamacher, A. A. Smith, Eds., 48
Search beneath the Sea, The, J. L. B. Smith, 101
Seidel, K., *Die Flechtbinse (Scirpus lacustris L.)*, vol. XXI of *Die Binnengewässer*, 266
Sennholz, M., Ed., *On Freedom and Free Enterprise*, 216
Shapiro, H. L., *Aspects of Culture*, 321
Shepard, A. O., *Ceramics for the Archaeologist*, 268
Smith, A. A. *See* Stevens, R., 48
Smith, J. L. B., *The Search beneath the Sea*, 101
Smith, M. B., *Opinions and Personality*, 102
Soffer, L. J., *Diseases of the Endocrine Glands*, 45
Space Traveler's Guide to Mars, A, I. M. Levitt, 214
Spector, W. S., Ed., *Handbook of Biological Data*, 105
Stevens, R., H. F. Hamacher, A. A. Smith, Eds., *A Scientific Sampler*, 48
Stratigraphical Palaeontology, E. Neaverson, 45
Surgical Treatment of Penetrating Wounds of the Heart, Pericardium and Mediastinum, N. I. Grigor'ev, 47
Swinnerton, H. H., *The Earth beneath Us*, 161

Tanner, J. M., and B. Inhelder, Eds., *Discussions on Child Development, Proceedings of the World Health Organization Study Group on the Psychological Development of the Child*, vols. I and II, 323
Theory and Dynamics of Grassland Agriculture, J. R. Harlan, 160

Theory of Lie Groups, I. C. Chevalley, 324
Things Maps Don't Tell Us, A. K. Lobeck, 159
Thistlethwaite, D. K. B. *See* Imhoff, K., 270
Toward a Unified Theory of Human Behavior, R. R. Grinker and H. MacG. Hughes, Eds., 104
Travers, M. W., *A Life of Sir William Ramsay*, 213

Usinger, R. L., Ed., *Aquatic Insects of California, with Keys to North American Genera and California Species*, 108

Varieties of Human Value, C. Morris, 49

Wallace, H. A., and W. L. Brown, *Corn and Its Early Fathers*, 107
Watson, F. G., *Between the Planets*, 103
Weeks, M. E., *Discovery of the Elements*, 325
Wendt, H., *In Search of Adam*, 108
Wheat Industry in Australia, The, A. R. Callaghan and A. J. Millington, 103
White, G. F., Ed., *The Future of Arid Lands*, 267
Wilkins, H. P., and P. Moore, *How to Make and Use a Telescope*, 50
Wind and the Weather, The, J. Bolton, 324
World of Mathematics, The, J. R. Newman, 217
World Symposium on Applied Solar Energy, Proceedings, 320

Analytic Subject Index

AAAS, committees of, 201; council meeting of, 151; dedication of new building of, 24; meeting report of Pacific Division of, 53; new headquarters building of, 54; New York meeting of, 204; officers of, 151, 201; and regional consultants on mathematics and science teaching, 154; and report of Interim Committee on the Social Aspects of Science, 146; representatives to council of, 203; socio-psychological prize of, 264; E. L. Tatum named to editorial board of, 264; traveling library program of, 212
Absorption, and effect on modifying solar energy, 57
Adolescents, and attitude toward scientists, 135
Aging, effect of radiation on, 5
Agriculture, and rice culture in Spain, 66
Animal, genetics and breeding of, 183; nature of mental processes in, 309
Antarctic geophysics, and International Geophysical Year, 143
Argiope aurantia, 33
Astronomy, and origin of elements, 91; and solar energy, 55; and Southern Hemisphere observatory, 111
Atmosphere, and effects on extraterrestrial energy, 55; and International Geophysical Year, 144

Bache, A. D., and Coast Survey, 290
Bee, honey, behavior in, 313
Behavior, freedom and control in human, 189; history of study of animal, 309; of man as supreme being among earth organisms, 245
Bird, navigation in, 315; nest-building behavior of, 314; songs of, 316
Bituminous sand, as source of oil, 283
Blood, effect of radiation on, 5
Bone, strontium-90 in, 243
British Medical Research Council, and report on radiation hazards, 8

Canalization, proposed for Moselle River, 255
Cancer, and nuclear radiation, 4
Cartography, and history of nautical charting, 290
Cellulose, silverfish digestion of, 123
Charting, nautical, history of, 290
Chemical elements, theories on origin of, 84
Clouds, and influence on solar energy, 59
Coal, world production and consumption of, 223
Coast Survey, development of, 290
Colorado, oil shale in, 275
Colorado Dam, controversy on, 199
Cosmic rays, and International Geophysical Year, 143
Ctenolepisma lineata, physiology of digestion in, 123
Culture, and human population, 165; and man's place in living nature, 251

Darwinism, Huxley's defense of, 171; and effect on man's outlook on life, 245
Determinism, in human behavior, 189
Drosophila, in radiation studies, 7, 9

Earth satellite, and International Geophysical Year, 144
Ecology, overpopulation and human, 165
Education, and motivation of high-school students to science, 135; and need of humanities in secondary schools, 197
Elements. *See* Chemical elements
Embryology, T. H. Huxley's contribution to, 173
Energy, and political science, 34; production and consumption of, 12, 221; solar, 55, 226
Erratum, for "Formation of the elements," W. A. Fowler, 200; for "Studies on deep mass culture of algae in Israel," A. M. Mayer, A. Eisenberg, M. Evenari, 200
Evolution, human, 171; and man's preeminence in nature, 245; and political science, 34
Experimentation, role of statistics in, 26

Fallout, of radiostrontium, 5, 237
Fasciola hepatica, life-cycle of, 231
Fertility, and population problem, 166
Flukes, damage to livestock by internal parasitic, 229
France, and canalization of Moselle River, 255
Freud, and genius, 75
Fuel, production and consumption of, 221
Fusion as source of energy, 228

Gas, natural, world production and consumption of, 222
Genetics, and animal breeding, 183; and human heredity counselors, 199; and man's preeminence in nature, 245; and nuclear radiation, 6, 18; and political science, 40
Genius, nature of, 75
Geodetic Survey, history of development of, 290
Germany, and canalization of Moselle River, 255
Glaciology, and International Geophysical Year, 143
Gypsum, on Sacramento Plain, 302, 304

Haemonchus contortus, life-cycle of, 233
Hassler, F. R., and Coast Survey, 290
Honey bee, behavior of, 313
Human being, biologic effects of radiation on, 3, 18, 237; ecological problems in overpopulation of, 165; predetermination in behavior of, 189; and preeminence in living nature, 245
Humanities, in secondary schools, 197
Humidity, and parasites, 233
Huxley, T. H., 171, 196

Icing, tunnel for research on, 83
Insect, nutrition in, 123

Insemination, controversies arising from artificial, 41
Instinct, in animals, 311
Instrumentation, in astronomy, 116
Intelligence, and man's place in living nature, 249
International Astronomical Union, 114
International Geophysical Year, meteorology in, 141
Intuition, and genius, 76

Lake, bottomless, on Sacramento Plain, 33
Learning, in animals, 313
Limestone, on Sacramento Plain, 302
Livestock, effects of parasites on, 229

Malaria, and rice growing in Spain, 72
Mathematics, motivation of high-school students to, 135
Mendelism, principles of, 183
Metal, requirements for light, 227
Meteorology, in International Geophysical Year, 141
Mexico, sulfur mining in, 128
Milk, strontium-90 in, 242
Moselle River, canalization of, 255

National Academy of Sciences, and report on radiation hazards, 8, 18
Nautical charting, history of, 290
Nematodes, damage to livestock by internal parasitic, 229
New Mexico, sinkholes in, 302
Nitrogen utilization, in silverfish, 127
Nuclear energy, strontium-90 as by-product of, 237; uses of, 11, 224
Nuclear reactors, types of, 15, 21
Nuclear synthesis, mechanism of, 86

Observatory, international, in Southern Hemisphere, 111
Oceanography, and International Geophysical Year, 142
Oil, sources of, 275; world production and consumption of, 221
Oil shale, as source of oil, 223, 276
Orchid, rare species of, 236
Overpopulation, study of problems in human, 165
Ozone, absorption in atmosphere of, 57

Paper, as food for silverfish, 123
Parasitology, and economy of livestock production, 229
Pecos River, and bottomless lakes, 302
Philosophy, and science, 178
Phonics, and discrepancies in spelling and pronunciation, 198
Photogrammetry, development of aerial, 293
Physics, of upper atmosphere and IGY, 143
Plastics, as protection for growing plants, 226
Plutonium, civilian uses for, 14
Political science, applications of science to, 34
Population, and mutations, 9; problems in human, 165
Population genetics, principles of, 184
Protozoans, damage to livestock by, 229
Psychoanalysis, and genius, 82
Psychology, and animal behavior, 309; and freedom in human behavior, 189

Radcliffe Observatory, in South Africa, 122
Radiation, effects and uses of nuclear, 3, 6, 11, 17, 41; solar, 55
Radioactive materials, global distribution of, from fallout, 238
Ransom, B. H., studies of parasites by, 232
Religion, and science, 178
Research, importance of statistics in, 26
Rice, Spanish culture of, 66

Sacramento Plain, topography of, 302
Sandstone on Sacramento Plain, 302, 304
Science, motivation of high-school students to, 135; popularization of, 171; and society, 21, 146
Science teaching, and need for humanities, 197
Scientific manpower, and motivation of high-school students, 135
Scientific methods, role of statistics in, 26
Scientists, as seen by adolescents, 135
Sheep, parasitic diseases of, 229
Silverfish, physiology of digestion in, 123
Sinkholes, on Sacramento Plain, 302
Soil, strontium-90 in, 240
Solar energy, on clear and cloudy days, 55; as source of fuel, 224
Song, study of bird, 316
Southern Hemisphere, international observatory for, 111
Spain, rice culture in, 66
Spider, web construction of, 33
Stars, synthesis of elements in, 91
Statistics, in scientific research, 26
Strontium-90, global distribution of, 237
Sulfur, Mexican mining of, 128
Sun, energy from, 55
Supernovae, and origin of elements, 88
Systematics, T. H. Huxley's contribution to, 173

Tatum, E. L., 264
Telescopes, astronomical, 111
Thermonuclear reaction, need for research on, 20
Thorium, nuclear reactor use of, 20

United Kingdom, and economics of nuclear power, 15
Uranium, nuclear reactor use of, 17, 20

Water, as source of energy, 224
Water vapor, on clear and cloudy days, 57
Worms, damage to livestock by internal parasitic, 229

X-rays, as a radiation hazard, 5